

Claims

1. A metal holder with electrode pins, which comprises a metal holder 5 and at least two electrode pins 4 for allowing passage of electrical current, wherein each electrode pin 4 is larger in diameter at its head portion 4a than at its terminal portion 4b, and plastic members 6 are arranged to surround a part of the respective electrode pins 4 circumferentially, and wherein through holes 23 for the respective electrode pins 4 to pass through the holder 5 are formed in the holder 5, and the electrode pins 4 are fixed to the holes 23 via the plastic members 6, each hole 23 having a diameter-reduction portion 23a at a part thereof.
2. The metal holder with electrode pins according to Claim 1, wherein the each electrode pin 4 has a constricted portion 4c in a part thereof located in the hole 23.
3. The metal holder with electrode pins according to Claim 1 or 2, wherein material of the plastic member 6 is a super engineering plastic.
4. The metal holder with electrode pins according to Claim 1 or 2, wherein the holder 5 has, at its portions around the holes 23, pressed portions 27.
5. The metal holder with electrode pins according to Claim 1 or 2, wherein the head portion 4a of the each electrode pin 4 has a diameter larger than an inner diameter of the diameter-reduction portion 23a of the hole 23 and smaller than a center-to-center dimension between the two electrode pins 4.
6. The metal holder with electrode pins according to Claim 1 or 2,

wherein the holder 5 is provided, at a portion thereof on the side closer to an igniter portion 8, with a cylindrical projecting portion 5c surrounding the igniter portion 8, and a firing agent 8a is filled in an inner space surrounded by the projecting portion 5c.

5 7. The metal holder with electrode pins according to Claim 1 or 2, wherein the holder 5 is provided, at a portion thereof on the side closer to an igniter portion 8, with a cylindrical projecting portion 5c surrounding the igniter portion 8 and a cover 30 is arranged in an opening edge portion of the projecting portion 5c, and further an enhancer agent 9 is filled in an
10 inner space surrounded by the projecting portion 5c.

8. The metal holder with electrode pins according to Claim 1 or 2, wherein the electrode pins 4 and the plastic members 6 are integrally formed using an injection molding.

9. A method of producing a metal holder with electrode pins comprising:
15 the step that after plastic members 6 having holes are inserted in holes 23 formed in the metal holder 5, electrode pins 4 are inserted in the holes of the plastic members 6, and

the step that the metal holder 5 is pressed at portions thereof around both opening portions of the holes 23 in a depth direction thereof so that the
20 plastic members 6 can be partly reduced in diameter to fix the electrode pins 4.

10. A method of producing a metal holder with electrode pins comprising:
the step that after electrode pins 4 are inserted in holes of plastic members 6 having holes or after the plastic members 6 and the electrode
25 pins 4 are integrally formed using an injection molding, the plastic members

6 are inserted in holes 23 formed in the metal holder 5, the plastic members 6 are inserted in the holes 23 formed in the metal holder 5, and

the step that the metal holder 5 is pressed at portions thereof around both opening portions of the holes 23 in a depth direction thereof so that the plastic members 6 can be partly reduced in diameter to fix the electrode pins 4.

11. A gas generator comprising a cup 3 packed with gas generant 2 to be burnt to generate gases, at least two electrode pins 4 for allowing passage of electrical current, an igniter portion 8, and a holder 5 joined to the cup 3 to seal up the gas generant 2, wherein the electrode pins 4 and the holder 5 form the metal holder with electrode pins according to Claim 1 or 2, and wherein the igniter portion 8 has a resistance element 7 interconnecting head portions of the electrode pins 4 and a firing agent 8a formed at least around the resistance element 7.

12. The gas generator according to Claim 11, wherein the cup 3 and the holder 5 are connected with each other by welding.

13. The gas generator according to Claim 11, which has an enhancer agent holder 10, placed in the cup 3, for containing an enhancer agent 9.

14. The gas generator according to Claim 11, which has an insulating member 11 on a surface of the holder 5 on the side thereof closer to the igniter portion 8.

15. The gas generator according to Claim 13, wherein a cap 14 is arranged to cover an outer portion of an enhancer agent holder 10 on the side thereof closer to gas generant 2.

16. The gas generator according to Claim 11, wherein joining portions of

the holder 5 and an opening edge 3c of the cup 3 being joined are located in a surface of the holder 5 on the side thereof closer to the igniter portion 8, and the joining portions are joined together by welding, by friction stir welding; or by adhesive bonding.